Are People Physically Inactive Because of Their Genes?

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Research indicates that the inclination to be physically active or sedentary has a biological foundation. Twin and family studies confirm that physical activity-related traits are characterized by familial aggregation and influenced by genetic factors. Results from animal model studies indicate that single genes can markedly influence physical activity-related behavior. The first molecular genetic studies on physical activity traits in humans have been published during the last few years. They support the notion that it is possible to detect relatively small, yet biologically important genetic effects impacting the tendency to be sedentary or habitual physical activity at the molecular level. We are beginning to appreciate that in utero environment and epigenetic events may play a role in postnatal physiology and behavior but their impact on physical inactivity or physical activity level remains to be determined.

The complete article appears in the June 2006 issue of the President’s Council on Physical Fitness and Sports Research Digest. The Research Digest is published four times a year and includes manuscripts related to physical activity and health. Articles are available free through the President’s Council on Physical Fitness and Sports at http://www.fitness.gov/pcpfs_research_digs.htm
Erratum

In the article “An Exploratory Analysis of Adherence Patterns and Program Completion of a Pedometer-Based Physical Activity Intervention” which appeared in Vol. 3, No. 2 of the Journal, Figure 4 on page 217 was printed with an incorrect caption; Figure 4 with the correct caption appears below.

Figure 4—(A) Activity goals (expressed as steps/day) of program completing participants who provided these data ($n = 85$) in weeks 1–4 of the program compared with actual baseline steps/day. (B) Proportion of participants reaching their stated goals in each week of the program. For this graph, average steps/day over a 7-day period were compared with the stated daily goal. Each differentiated bar represents weeks 1–4 in consecutive order.